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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, TANH Q

ART UNIT PAPER NUMBER

2182

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,429

Applicant(s)

HARARI ET AL.

Examiner

Tanh Q. Nguyen

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 50-82 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 50-82 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 15 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION


1. In view of the Amended Brief on Appeal filed on July 27, 2005 PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:


KIM HUYNH
PRIMARY EXAMINER
10/13/05

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 71-78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It appears that there are four different host systems in claim 71 - as there are four recitations of "a host system" in lines 2, 5, 6 and 9 respectively.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 50-57, 59-60, 62, 67-70 are rejected under 35 U.S.C. 102(b) as being anticipated by **Sasaki et al. (USP 5,018,017)**.

6. As per claims 50-57, 59-60, 62, **Sasaki** teaches a method of storing user data on, and retrieving user data from a non-volatile memory card [15, FIG. 1; col. 15, lines 42-47], comprising:
encoding the user data [col. 9, lines 12-21],

storing both the encoded user data and information useful to decode the encoded user data [col. 9, lines 22-26; col. 9, lines 50-54] on the memory card,

thereafter reading both the encoded user data [col. 12, lines 5-11] and the decoding information [col. 11, line 68-col. 12, line 5] from the memory card, and

decoding the read encoded user data by use of the decoding information read from the memory card, thereby to obtain the user data [col. 11, line 66-col. 12, line 36],

encoding the user data including compressing/encrypting the user data [col. 9, lines 22-26 - data being compressed are encrypted as it is no longer in its original format; it also appears that applicant does not differentiate encryption from compression - see claim 53], and the decoding information including a decompression/decryption algorithm/key/driver useful to decode the encoded data [type of compression mode - col. 12, line 5];

the non-volatile memory card including a flash EEPROM array [col. 15, lines 42-47], and both the encoded user data and the decoding information being stored in the flash EEPROM array [FIG. 9A-FIG. 9E];

the encoding and storing occurring when the memory card is electrically connected to a first host system [10, FIG. 1; FIG. 6A-FIG. 6B; col. 7, lines 47-48], and the reading and decoding occurring when the memory card is electrically connected to a second host system [90, FIG. 11; col. 11, lines 62-65];

the encoding being accomplished by the first host system [col. 7, line 47-col. 9, line 21] or the decoding being accomplished by the second host system [col. 11, line 62-col. 12, line 60];

the encoding being accomplished in a memory controller function included in a mother electronic card [FIG. 6A-FIG. 6B] to which the memory card is removably connectable, and the decoding being accomplished in a memory controller function included in a mother electronic card [FIG. 11] to which the memory card is removably connectable.

7. As per claims 67-70, Sasaki teaches a non-volatile memory card comprising a flash EEPROM array [col. 15, lines 42-47], encoded user data stored in a first portion of the array [DATA AREA - FIG. 9A], and data of information useful to decode the encoded user data stored in a second portion of the array [DIRECTORY AREA - FIG. 9A; FIG. 9B].

Sasaki further teaches stored encoded data including compressed/encrypted user data and information useful to decode user data including decompression/decryption algorithm/key [col. 9, lines 22-26 - data being compressed are also encrypted; it also appears that applicant does not differentiate encryption from compression - see claim 53; type of compression mode - col. 12, line 5].

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sasaki et al.**.

Sasaki discloses storing including programming the encoded user data and decoding information into the flash EEPROM array, but does not teach individual cells of the array having more than two states.

It was known in the art at the time the invention was made for a memory cell to have more than two states to allow the memory cell to store one of three or more values in the memory cell.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an EEPROM array with each cell having more than two states in order to allow each memory cell of the EEPROM array to store more than one bit of information.

11. Claims 61, 63-66, 71-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sasaki et al.** in view of **Hayashi (USP 5,829,014)**.

12. As per claim 61, Sasaki discloses the invention except for the encoding and decoding being accomplished in a memory controller function included in a mother electronic card that is removably connectable with at least one of the first and second host systems, and into which the memory card is removably connected.

Hayashi teaches a data processor 12 and controller 18 being incorporated in a an adapter which is independent of, and detachably connectable to a memory card 10 [col. 7, lines 51-56] - as an alternative embodiment to the data processor 12 and the controller 18 being built in a digital still camera or a playback apparatus [FIG. 6], and as an alternative embodiment to the data processor 12 and the controller 18 being incorporated in the memory card 10 [FIG. 1] to encode data for storage on the memory card and to read encoded data from the memory card [col. 3, lines 50-53; col. 3, line 66- col. 4, line 1; col. 7, lines 14-15] - hence teaches a mother electronic card that is removably connected to the first and second host systems, and into which a memory card is removably connected, the mother electronic card including a memory controller function [data processor 12, controller 18] being used to encode data and store encoded data in the memory card, and also to read encoded data from the memory card, for host systems and memory cards not equipped with such memory controller function.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mother electronic card, as is taught by Hayashi, the

mother electronic card including a memory controller function taught by Sasaki (memory controller function for encoding user data and storing encoded user data and information useful to decode the user data on a memory card), in order to encode data and store encoded data for first host systems (digital still cameras) and memory cards not equipped with Sasaki memory controller function.

It would have been also obvious to one of ordinary skill in the art at the time the invention was made to include a mother electronic card, as is taught by Hayashi, the mother electronic card including a memory controller function taught by Sasaki (memory controller function for reading encoded user data and information useful to decode the user data on a memory card to decode read encoded user data), in order to decode read encoded data for second host systems (reproduction units) and memory cards not equipped with Sasaki memory controller function.

13. As per claims 63-65, Sasaki further teaches the first host system being a camera [10, FIG. 1] and the user data including visual field data obtained by the camera [col. 9, lines 7-21];

the second host system including a reproducing unit for reading out user data from the memory card and displaying video image on a TV monitor or the like [col. 11, lines 62-65] - hence the second host system including a personal computer for reading out user data from the memory card and displaying video image on the personal computer monitor.

Sasaki, therefore, discloses the invention except for connecting a mother card to a second host system, wherein the mother card includes a controller function for the

memory card, connecting the memory card to the mother card, thereafter causing the mother card to read the encoded user data and the decoding information from the memory card, and decoding the read encoded user data within the controller function of the mother card by use of the decoding information read from the memory card, thereby to provide the user data to the second host. Essentially, Sasaki teaches a decoding function residing in the second host system instead of on a mother card.

Hayashi teaches a mother electronic card that is removably connected to the second host system and into which a memory card is removably connected, the mother electronic card including a memory controller function being used to read encoded user data from the memory card - for second host systems and memory cards not equipped with such memory controller function (see rejection of claim 61 above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mother electronic card, as is taught by Hayashi, including a memory controller function taught by Sasaki (memory controller function for reading encoded user data and decoding information from the memory card, and decoding the read encoded user data by use of the decoding information), in order to decode stored encoded user data in the memory card - for second host systems (reproduction/playback devices) and memory cards not equipped with Sasaki memory controller function.

14. As per claim 66, Sasaki discloses the invention except for the encoding of user data and storing the encoded user data and information useful to decode the user data being accomplished within a controller function of a mother card.

Hayashi teaches a mother electronic card that is removably connected to the first host system and into which a memory card is removably connected, the mother electronic card including a memory controller function being used to encode data and store encoded data in the memory card - for host systems and memory cards not equipped with such memory controller function (see rejection of claim 61 above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mother electronic card, as is taught by Hayashi, including a memory controller function taught by Sasaki (memory controller function for encoding user data and storing encoded user data and information useful to decode the user data on a memory card), in order to encode data and store encoded data - for first host systems (digital still cameras) and memory cards not equipped with Sasaki memory controller function.

15. As per claims 71-78, Sasaki teaches a first host system [digital still camera 10, FIG. 2] and a second host system [reproducing unit 90, FIG. 11], each with a receptacle [14, FIG. 1; FIG. 11] adapted to receive a memory card that includes non-volatile memory [15, FIG. 1],

a controller of the first host system [31, 24, 29, FIG. 2] for programming data into the non-volatile memory [col. 7, line 47-col. 9, line 21] and a controller of the second host system [92, 94, 102, FIG. 11] for reading data from the non-volatile memory [col. 11, line 66-col. 12, line 2] in response to commands from the first and second host systems [FIG. 10; col. 11, line 66- col. 2],

an encoder [31, FIG. 2] of data received from the first host system, thereby causing encoded data to be stored in the non-volatile memory [col. 9, lines 7-21], and a decoder [92, 94, FIG. 11] of encoded data read from the non-volatile memory [col. 12, lines 14-21], thereby causing decoded data to be provided to the second host system [a reproduction unit].

Sasaki, therefore, discloses the invention except for the controller, the encoder and the decoder being built in a memory system card.

Yasashi teaches a mother electronic card that is removably connected to a first host system and a second host system, and into which a memory card is removably connected, the mother electronic card including a memory controller function being used to encode data and store encoded data in the memory card, and also to read encoded data from the memory card - for host systems and memory cards not equipped with such memory controller function (see rejection of claim 61 above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mother electronic card, as is taught by Hayashi, including the memory controller, encoder and decoder functions taught by Sasaki (functions for encoding and storing user data, and for reading encoded user data and decoding the read encoded user data) in order to encode and store data in a memory card, and to read and decode data stored in the memory card - for first host systems (digital still cameras), second host systems (reproduction/playback devices) and memory cards not equipped with Sasaki controller, encoder and decoder functions.

Sasaki further teaches stored encoded data including compressed/encrypted user data and information useful to decode user data also stored in the non-volatile memory including decompression/ decryption algorithm/key [col. 9, lines 22-26 - data being compressed are also encrypted; it also appears that applicant does not differentiate encryption from compression - see claim 53; type of compression mode - col. 12, line 5].

16. As per claims 79-82, claims 79 and 82 correspond generally to claim 63 and are rejected on the same basis - as the combination of Sasaki and Hayashi teaches a data storage system [FIG.2; FIG. 11], comprising:

- a re-programmable non-volatile semiconductor memory [15 - FIG. 2, FIG. 11],
- first data encrypted and stored in the memory (encoded user data),
- second data stored in the memory of information useful to decrypt the first data (information useful to decode the encoded user data),

- a controller operably connected with the memory to decrypt the first data by use of the second data (memory controller function of mother card), and

- a connector electrically connected with the controller in a manner to pass the decrypted first data therethrough and adapted for removable connection with different host devices (mother card being electrically connected to host devices and passing decrypted data to host devices); and

- a first card (the memory card) being used to store first and second data, and a second card (the mother card) including the controller and being electronically

connected to a host, the first and second cards being removably connectable with each other.

Sasaki further teaches information useful to decrypt first data including decompression/ decryption algorithm/key [col. 9, lines 22-26 - data being compressed are also encrypted; it also appears that applicant does not differentiate encryption from compression - see claim 53; type of compression mode - col. 12, line 5]; and

Response to Arguments

17. Applicant's arguments with respect to claims 50-82 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Quang Nguyen whose telephone number is (571) 272-4154 and whose e-mail address is tanh.nguyen36@uspto.gov. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh, can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for After Final, Official, and Customer Services, or (571) 273-4154 for Draft to the Examiner (please label "PROPOSED" or "DRAFT").

Effective May 1, 2003 are new mailing address is:


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10/15/2005

TQN
October 15, 2005